

Monthly Progress Report

For the project entitled:

Summer Transportation Institute

Reporting Period: June 2007

Submitted by:

Susan Gallagher

Education Program Coordinator
Western Transportation Institute (WTI)
College of Engineering
Montana State University – Bozeman

Submitted to:

Montana Department of Transportation

Sue Sillick
Research Programs
2701 Prospect Avenue
Helena, Montana 59620

July 3, 2007

Task 1: Project Management and Reporting

This monthly progress report covers June 1 – June 30, 2007.

Action Items for Next Period:

- A quarterly progress report will be submitted in August for the period May 1 – July 31, 2007.

Status: On-going

Task 5: Staff Hires

An Academic Program Coordinator, a Teaching Assistant, and two Residence Hall Advisors were hired for the STI. Teaching staff continued preparatory work for the STI during the first two weeks of June, including developing teaching materials for a number of team design and build projects, contacting guest teaching staff and assisting with coursework preparation, finalizing room logistics, preparing information packets and binders for participants, and purchasing supplies. Residence Hall advisors began preparations on June 14 and developed a sports/recreation plan for the two weeks.

An STI staff orientation was held on June 14 to go over policies and procedures, risk management and reporting procedures, as well as program goals and staff communication. STI staff training also included a defensive driving course and certification to operate an MSU 15-passenger van for the group.

Status: 100% completed

Task 6: Program Logistics

A final information packet with a map of campus, directions to the dormitories, room assignments, staff and student contact information, a daily schedule, and an agenda for a parent/participant orientation to be held on move-in day was sent out to each participant. STI staff prepared dorm room signage for move-in day, purchased supplies for the evening recreation program, and prepared a meal plan for the weekend when campus food service is unavailable.

Status: 100% completed

Task 7: STI Program Planning

The list of panelists for the scheduled Transportation Career Panel was finalized. Panelists included: Michael Sanderson (Engineering, Inc. in Billings), Terry Smith (City of Billings Engineer), Lloyd Rue (Federal Highways Administration), Scott Keller (Montana Department of Transportation), Rebecca Gleason (WTI Research Engineer), and Pat McGowen (Civil Engineering faculty). The career panel was held on June 21 followed by a picnic hosted by the MDT Design Unit.

STI teaching staff completed the development of hands-on design/build activities for program and RA staff produced a schedule of sports/recreation activities for the program.

Status: 100% completed

Task 8: Conduct STI

Student participants arrived to move in to the MSU dormitories at noon on Sunday, June 17. They were met and assisted by STI teaching and residence hall staff. Room assignments had previously been mailed to participants and each room was decorated with STI “theme” name placards. At 2pm, participants gathered with their parents in the dormitory lounge for a parent/student orientation. Beez Lucero, STI Program Coordinator, conducted the orientation, which included information on emergency contacts during the program, policies and procedures regarding student conduct and disciplinary actions, schedules for daytime, evening, and weekend activities, and information about the closing ceremony/banquet. After parents departed, RAs toured the dormitory facilities with STI participants, covered emergency evacuation procedures and routes, and played a number of icebreakers to get the group acquainted. In the evening, participants had a pizza party in the dorms.

On June 18, the program was officially opened with an orientation for participants. Students took a transportation knowledge “pre-test” to gauge their varied interests and backgrounds. Topics to be covered during the STI were introduced through a small group whiteboard/discussion activity. Steve Albert, Director of the Western Transportation Institute, also provided an introductory presentation on the future of transportation and needs for new innovations in this field.

Student classroom activities during the remaining two weeks followed the STI Calendar (attached). Week 1 topics included: transportation and traffic engineering, geotechnical engineering, urban planning, structures, automotive engineering, human factors, and infrastructure. Lab activities included making concrete pucks using different mix designs, a soils retaining wall competition, a computer laboratory activity using SimCity, using radar guns in the field for speed detection and then entering data into a traffic simulation program in the computer lab, and a session in the driving simulator. Students also began a major balsa wood bridge team design/build activity.

Career and college planning activities during week 1 included students completing the on-line career “Strong Interest Inventory” and receiving guidance on results interpretation during a talk by Alyce Maas from the MSU Career Services Office. STI participants also attended a talk by Civil and Construction Engineering Department Head, Brett Gunnink, on college programs and careers in these fields. On June 21, a panel made up of six transportation professionals from a variety of backgrounds (city, state, and federal government as well as university/research and the private sector) introduced a number of different career paths to the transportation field and answered student questions. Students were able to informally discuss career and college opportunities with panelists as well as MSU students employed in the MDT Design Unit during a barbecue hosted by the MDT Design Unit immediately following the Transportation Career Panel.

On Friday, June 22, STI participants toured the Montana Department of Transportation headquarters in Helena. After a general introduction and welcome, they explored the CAD and photogrammetry units more in depth and learned about historical preservation efforts from the MDT historian. Following the MDT tour, students took a ferry ride on the Missouri River through the Gates of the Mountains, before returning to Bozeman.

Evening sports and recreation activities for week 1 included: a hike to the “M,” a trip to the Bozeman Hot Springs, movie night in the dorms, bead and hemp necklace making, Ultimate Frisbee, and ping pong. On Saturday, June 23, STI participants floated down the Madison River on inner tubes and had a picnic. On Sunday, June 24, they visited and toured Lewis and Clark caverns.

Week 2 classroom activities included an introduction to aviation, highway safety, trucking and freight, and road ecology. Lab activities included a crash attenuator team design project. Students completed their balsa wood bridge project and tested the results. Awards were given for aesthetics, best engineered, and best bridge overall. Participants also began a second team design/build project that explored weight and balance issues for gliders. Team gliders were presented and tested on Thursday and team awards given.

On Monday, June 25, students toured the Gallatin Field airport. They first talked to flight instructors at Summit Aviation and were able to take 30 minute discovery flights with instructors in Summit Aviation’s flight school planes. After discovery flights, students toured the aircraft repair hangar, the safety and fire rescue building, and the airport terminal.

College planning activities during Week 2 included a talk on college entrance and preparation by Casey Schreiner from MSU New Student Services.

Sports and recreation activities during Week 2 included Ultimate Frisbee, a movie night, an evening at the mall, and an ice cream social.

Students completed final program evaluations and were “tested” on what they learned from the program during a team Jeopardy game. They also planned and prepared the Closing Ceremony, which was held for participants, family, staff and guest instructors on Friday, June 29. Students checked out of their dorm rooms before the closing banquet on Friday and departed with their parents/family members immediately following the ceremony.

Status: 100% completed

* Task 9 (de-briefing meeting at MDT), Task 10 (preparation of final report), and Task 11 (preparations for 2008 STI) will begin during the third quarter.